

Listing of Claims:

1. (Original) A method of searching a database, the method comprising:
generating a hash key value based on a plurality of selector values;
selecting an entry in the database having an address corresponding to the hash key value, wherein entries in the database include corresponding hash values;
evaluating the selected entry to determine if the entry in the database corresponds to the plurality of selector values;
incrementing the address corresponding to the hash key value if the selected entry does not correspond to the plurality of selector values;
wherein the selecting, the evaluating and the incrementing are repeated until the hash value included in selected entry has a value which indicates that entries subsequent to the selected entry will not correspond to the plurality of selector values.
2. (Original) A method according to Claim 1, wherein the selecting, the evaluating and the incrementing are repeated until an entry corresponding to the plurality of selector values is reached or until the hash value included in the selected entry has a value which indicates that entries subsequent to the selected entry will not correspond to the plurality of selector values.
3. (Original) A method according to Claim 1, wherein the selecting, the evaluating and the incrementing are repeated until the selected entry is a null entry.
4. (Original) A method according to Claim 1, wherein the selecting, the evaluating and the incrementing are repeated until the selected entry has a hash value greater than the hash key value.
5. (Original) The method of Claim 2, further comprising:
providing the selected entry if the selected entry corresponds to the plurality of selector values; and
providing an indicator of failure of the search if the selected entry includes a hash

value other than the hash key value or the selected entry has a null value.

6. (Original) The method of Claim 1, wherein generating a hash key value based on a plurality of selector values comprises encrypting the selector values to provide the hash key value.

7. (Original) The method of Claim 6, wherein encrypting the selector values to provide the hash key value comprises:

grouping the plurality of selector values into blocks having a predefined number of bits;

padding the blocks of grouped selector values to the predefined number of bits;

encrypting the padded blocks; and

truncating the encrypted padded blocks to a number of bits in the hash key value to provide the hash key value.

8. (Original) The method of Claim 7, wherein encrypting the padded blocks comprises encrypting the padded blocks using Cipher-Block-Chaining encryption mode of Data Encryption Standard (DES-CBC) encryption.

9. (Original) The method of Claim 8, wherein the database comprises an Internet Protocol Security (IPSec) security association database, the plurality of selector values comprise IPSec selector fields and the predefined number of bits comprises 64 bits.

10. (Original) The method of Claim 1, wherein the database comprises an Internet Protocol Security (IPSec) security association database and the plurality of selector values comprise IPSec selector fields.

11. (Original) The method of Claim 10, wherein the database has a size of about four times a maximum number of supported security associations.

12. (Original) The method of Claim 1, wherein the database is contained in a

circular memory and wherein incrementing the address comprises:

incrementing the address to a next consecutive address if the address is less than a maximum address of the circular memory; and

setting the address to a first address of the circular memory if the address is equal to the maximum address of the circular memory.

13. (Original) The method of Claim 12, wherein the selecting, the evaluating and the incrementing are repeated until a hash value of the selected entry is less than a hash value of a previous selected entry and the hash value of the selected entry is greater than the hash key value.

14. - 36. (Canceled)

37. (Original) A system searching a database, comprising:
means for generating a hash key value based on a plurality of selector values;
means for selecting an entry in the database having an address corresponding to the hash key value, wherein entries in the database include corresponding hash values;
means for evaluating the selected entry to determine if the entry in the database corresponds to the plurality of selector values;
means for incrementing the address corresponding to the hash key value if the selected entry does not correspond to the plurality of selector values;
means for repeatedly selecting, evaluating and incrementing until the selected entry has a null value or the hash value included in selected entry has a value other than the hash key value.

38. - 39. (Canceled)

40. (Original) A computer program product for searching a database, comprising:
a computer-readable storage medium having computer-readable program code embodied therein, the computer readable program code comprising:
computer-readable program code which generates a hash key value based on a

plurality of selector values;

computer-readable program code which selects an entry in the database having an address corresponding to the hash key value, wherein entries in the database include corresponding hash values;

computer-readable program code which evaluates the selected entry to determine if the entry in the database corresponds to the plurality of selector values;

computer-readable program code which increments the address corresponding to the hash key value if the selected entry does not correspond to the plurality of selector values;

computer-readable program code which repeatedly selects, evaluates and increments until the selected entry has a null value or the hash value included in selected entry has a value other than the hash key value.

41. - 62. (Canceled)